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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,069	10/22/2001	Thomas A. Keim	MIT-075AUS	6521

22494 7590 02/11/2004

DALY, CROWLEY & MOFFORD, LLP  
SUITE 101  
275 TURNPIKE STREET  
CANTON, MA 02021-2310

EXAMINER
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NGUYEN, MATTHEW VAN

ART UNIT	PAPER NUMBER
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2838

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/086,069

**Applicant(s)**

KEIM ET AL.

**Examiner**

MATTHEW V NGUYEN

**Art Unit**

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 and 52-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,7,12,21-27,29 and 52-63 is/are rejected.
- 7) ☒ Claim(s) 3-6,8-11,13-20 and 28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2838

1. Applicant's election without traverse of Group 1, claims 1-29 and new added dependent claims 52-63, filed on 17 November 2003, is acknowledged. Claims 30-51 have been canceled.
2. The disclosure should be carefully reviewed and ensure that any and all grammatical, idiomatic, and spelling or other minor errors are corrected. For instance, claim 22 is dependent on itself.
3. Claims 52-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.  
  
Claims 52-63 are indefinite because in base claims 52 and 60, it is not clearly understood if "a controller" is the same with "a controller" that is recited in independent claim 1.
4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 7, 12, 21-27, 29 and 52-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viti et al. (U.S. Pat. No. 6,249,101).

With regards to claims 1, 2, 7, 12, 21-27, 29 and 52-63, Viti et al. (i.e., Fig. 5) shows an electrical power system and a method thereof comprising all the claimed subject matter such as a switched-mode rectifier arranged in a bridge configuration including MOSFET transistors, each coupled to a diode, a controller coupled to the switched-mode rectifier for providing a controlled pulse sequence synchronized with an angular rotor position to activate and deactivate the switched-mode rectifier, except for the electrical power system being involved with a motor operation, not an alternator operation, a reversed function. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the electrical motor system as taught by Viti et al. into the alternator system, since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

5. Claims 3-6, 8-11, 13-20 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


None of prior art of record taken alone or in combination discloses the controller comprising a bounded summation circuit coupled to the PWM generator, a base duty ratio generator and a timing duty ratio generator, each coupled to the bounded summation circuit, and more detailed elements as recited in those objected claims above.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hurley et al. (U.S. Pat. No. 6,140,803), Schroeder (U.S. Pat. No. 6,236,183) and Jung (U.S. Pat. No. 6,650,083) also disclose electrical power systems each of which comprises substantial elements as recited in the claims of the instant application.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew V. Nguyen whose telephone number is (571) 272-2081.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2800.

  
MATTHEW V. NGUYEN  
PRIMARY EXAMINER